

NOTES ON THE RHYNCHOPHORA OF EASTERN
NORTH AMERICA WITH DESCRIPTIONS
OF NEW SPECIES, III

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This is the third¹ of a series of articles supplementary to the "Rhynchophora of Northeastern America" which was issued by Chas. W. Leng and myself in 1916. In them I make brief mention of new species since described by others from the territory covered by the Rhynchophora; also of species considered extralimital at the time that work was published, but which have since been taken within that territory. As our knowledge of the habits and distribution of these injurious weevils is constantly increasing, I include brief notes on new information of importance concerning those points discovered by others or myself from time to time.

Since the second of these supplementary papers appeared in 1922, I have collected extensively in southern Florida, especially around Lake Okeechobee, Miami and Royal Palm Park, and have taken a number of subtropical forms not before known from that region. Some of these are herein described as new species. Numerous specimens have also been received for naming which has added much to our knowledge of the distribution of certain forms.

The numbers before the majority of the species mentioned are the serial numbers of the same species in the Rhynchophora. Where no number is given the species was not included in that work. The nomenclature, where different from that of the Rhynchophora, is that of Leng's "Catalogue of the Coleoptera of America North of Mexico."

¹ The other two were published in this Journal, Vol. XXVIII, 1920, pp. 161-178, and Vol. XXX, 1922, pp. 95-106, 113-127.

7. *Toxotropis pusillus* Lec.

Since the "Rhynchophora" was issued this species has been taken at Dunedin, Cape Sable and Key West, Florida. About Dunedin it is frequently swept in late autumn and early spring from tall grasses and other herbage growing along the margins of ponds.

11. *Toxotropis floridanus* Leng.

This prettily marked little anthribid apparently occurs only on ferns and low herbage in dense hammocks. It is distributed throughout the southern half of Florida, having been recently taken at Lake Wales, on Kramer's Island in Lake Okeechobee and at Royal Palm Park. In some specimens the two large, dark spots, one on apical third of each elytron, are connected by a narrow dark bar across the suture.

12. *Eusphyrus walshi* Lec.

Specimens are now at hand from Dunedin, Lake Wales and Istokpoga, Florida and Marion County, Indiana. The adults usually occur on foliage of shrubs in the vicinity of water, and it has been reared by Champlain and Knull from dead twigs of sumac, black locust and hickory.

13. *Gonotropis gibbosus* Lec.

Champlain and Knull have recorded² this species as occurring on dead hemlock branches during successive years. No food plant was given in the Rhynchophora.

20. *Piezocorynus mixtus* Lec.

Sixteen examples of this species were taken July 8, 1923, from the bole of a dead beech near Broad Ripple, Marion County, Indiana. They were in crannies and little holes in the bark and jumped vigorously when disturbed.

24. *Toxonotus fascicularis* (Schön.).

New stations for the species are Everglade and Royal Palm Park, Florida. At the latter place it was found March 15 beneath bark of a dead Caribbean pine.

² Can. Ent., 1923, 115.

34. *Araecerus fasciculatus* (DeG.).

Found in recent years in some numbers at Dunedin and Lakeland, Florida, and sent to me for naming from Volusia County, that State. About Dunedin it has been taken in April from the seed pods of the Spanish bayonet, and by sweeping low shrubs. Those sent in were said to have been damaging blackberries.

69. *Apion anceps* Fall.

Several specimens were taken August 4 by sweeping along old roadways on high wooded ridges in Crawford County, Indiana. Known heretofore only from the unique Illinois type.

81. *Apion perminutum* Smith.

Taken in numbers in March at Royal Palm Park, Florida, by sweeping herbage on the border of a slough in the everglades.

83. *Apion tenuiforme* Fall.

Several examples have been taken in January at Dunedin, Florida, from the bark of dead pine.

85. *Apion coxale* Fall.

This species is at hand from Knoxville, Tennessee, and Montclair, Irvington and Berkely Heights, New Jersey.

90. *Apion gulare* Fall.

Taken at Lakeland, Caxambus and Miami, Florida, by beating dead limbs and bunches of Spanish moss. Known heretofore only from Key West and Biscayne Bay, that State.

92. *Apion walshi* Smith.

At hand from Porter County, Indiana, Framingham, Massachusetts, and Jamesburgh, New Jersey.

—. *Apion delta* Buchanan, Proc. Ent. Soc. Wash., 1922, 83.

Described from Virginia and North and South Carolina. An oblong, rather robust, black species, 2 mm. in length, with sparse

pubescence of hair-like scales and reddish legs. Belongs under *cc* of Group IV, p. 83 of the Rhynchophora.

113. *Apion parallelum* Smith.

Several specimens were taken August 4 by sweeping low herbage on the slopes of wooded hills in Crawford County, Indiana. The first record for that State.

— ***Tachygonus minutus* Blatch.**

Three additional specimens of this little weevil have been taken at Dunedin since it was described³ from a unique. It occurs in April on limbs of recently felled pine or in dense hammocks.

128. *Hormorus undulatus* (Uhler).

The adults of this handsome otiorhynchid have been recorded⁴ by Britton as feeding on the leaves of lily of the valley and by Champlain and Knull⁵ as attacking Solomon's seal and false Solomon's seal, the adults feeding on the leaves, the larvae "working externally on the tubers, chewing out large sections in their feeding operations." No food plant was mentioned in the Rhynchophora, the Britton record having been overlooked by us.

151. *Pachnaeus litus* (Germar).

152. *Pachnaeus opalus* (Oliv.).

Schwarz and Barber have recently shown⁶ that the names of these two species as determined by Horn⁷ and as used by Blatchley and Leng in the Rhynchophora, are wrong and that they should bear respectively the names given above. They state that Horn applied the old specific name, *opalus* (Oliv.), to the wrong species, and described the old species as new. The form with

³ Can. Ent., LII, 1922, 63.

⁴ Report Conn. Agr. Exp. Sta., 1905, 259.

⁵ Ent. News, XXXII, 1921, 270, and Can. Ent., LIV, 1922, 103.

⁶ Proc. Ent. Soc. Wash., 1922, 29.

⁷ Proc. Amer. Phil. Soc., XV, 1876, 82.

base of thorax strongly bisinuate, which occurs only in south Florida and Cuba, was described by Germar from Cuba in 1825 as *Cyphus litus*; while the more common one with thoracic base feebly bisinuate, which ranges from New Jersey southward, is the *P. opalus* (Oliv.), 1807, the *P. distans* Horn (1876) being a synonym.

156. *Pandeleteius subtropicus* Fall.

Three specimens were taken March 11, while beating along pathways in Brickell Hammock, just south of Miami, Florida. Known heretofore only from Key West.

157. *Compsus auricephalus* (Say).

A specimen taken at Olive Branch, southwestern Illinois, was received from C. A. Frost for naming. Not before recorded north of Mississippi.

—. *Polydrusus decoratus* Woodruff, Journ. N. Y. Ent. Soc., XXXI, 1923, 155.

Described from Hazen, Alabama, where sixty specimens were taken on sugar maple and chestnut oak. Smaller than *P. americanus* Gyll. (3.1–3.7 mm.), with brown scales of dorsal patch much paler, without white scales about the scutellum and beak shorter and much less constricted.

170. *Polydrusus sericeus* Schall.

Examples of this species, taken near Wooster, Ohio, have been sent me for naming.

177. *Eudiagogus rosenschoeldi* Fahr.

The first specimens known from Florida were recently sent to me for naming by Prof. J. R. Watson, of Gainesville. They were taken at Tampa on oak.

191. *Phytonomus nigrirostris* (Fab.).

Within recent years this weevil has become quite common in Marion County, Indiana, occurring on foliage of herbs along

streams and in moist woods. Only a single specimen had been taken in the State prior to 1916.

206. *Listronotus appendiculatus* (Boh.).

New records for this species are Marion County, Indiana, June and October; Moore Haven, Florida, March 27. Not before known from Florida and in Indiana only from Lake County in the extreme north of the State.

214. *Listronotus debilis* Blatch.

This species has been taken in some numbers in Marion County, Indiana, by sweeping low vegetation growing in alluvial woodland along the banks of White River.

— ***Desiantha nociva* Lea.**

This species, known as the "Australian tomato weevil," has recently gained a foothold in southern Mississippi, where it occurs over an area of 700 or more square miles.⁸ It was originally described from Australia, belongs to the Tribe Hyperini and is about 8 mm. long, dull grayish-brown in hue, clothed with buff and gray scales and with a V-shaped grayish mark on apical third of elytra. It hibernates as imago and both larvæ and adults attack the above-ground portions of tomato, potato, turnip and other plants.

— ***Hyperodes annulipes*, new species.**

Oblong-oval. Dark chestnut-brown, above thickly clothed with a dense crust of grayish-brown scales, those of beak and head with a metallic yellow tinge; antennæ and tarsi reddish-brown; femora with a broad ring of grayish scales just behind the middle. Beak slender, subcylindrical, three-fourths the length of thorax, finely and densely punctate and with five fine carinæ, the median one scarcely more evident than the others. Funicle with first and second joints subclavate, the second more than one-half longer than first, 3-7 submoniliform; scape slender, reaching eyes, its groove deep, narrow, well defined, directed toward their upper margin. Thorax relatively short, subcylindrical, about as wide as long, sides broadly rounded; disk densely and finely punctate, each puncture closed by a rounded convex scale; postocular lobes narrow, in repose covering half the eyes. Elytra one-half

⁸ See Chittenden, Circ. No. 282, U. S. Dept. Ent., July, 1923.

wider at base than thorax, humeri narrowly rounded; sides straight and feebly converging to apical third, thence more strongly so to the narrowly rounded apex; disk with sculpture hidden by the dense crust, intervals each with a row of short, stout inclined bristles. Under surface coarsely and closely punctate, the third and fourth ventrals more sparsely so. Length, 3.8-4 mm.

Described from two specimens taken March 26 at Dunedin, Florida, from a mass of decaying stems of pickerel weed. Belongs under *aa* of Group I, p. 166, of the Rhynechophora, but smaller than *cryptops* with beak much narrower and thoracic punctures much smaller. The disk of thorax appears granulate as in *H. sparsus* Say, due to the convex scales covering the punctures.

217. *Hyperodes cryptops* (Dietz).

New Florida stations for this species are La Belle, Moore Haven, and Royal Palm Park. It occurs in some abundance in March and April, but only about the margins of ponds and sloughs either on the flowers and foliage of pickerel-weed and arrow-head, or in muck near these plants.

226. *Hyperodes subcribratus* (Dietz).

This appears to be a scarce submarine species. But three specimens have been taken, two of which were sifted on April 9 from weed debris along the bay front at Dunedin.

— ***Hyperodes latinasus* Blatch.**

A single example of this species, heretofore known only from Fort Myers, Florida, was taken at Royal Palm Park while sifting decaying leaves in moist ground.

233. *Hyperodes mirabilis* (Dietz).

Three examples of this species, hitherto known from a unique Illinois type, are at hand from Lake and Marion counties, Indiana. They were taken singly by sweeping along the margins of sloughs in April, June and August.

250. *Pachylobius picivorus* (Germ.).

A specimen of this well known weevil, taken at Yarboro, Texas, was received for naming. It has not before been recorded west of Arkansas and Florida.

—. *Cholus cattleyae* Champ., Entom. Mo. Mag., 1916, 201.

This tropical Colombian orchid weevil has been introduced into greenhouses in Wisconsin, New Jersey and the District of Columbia. It is a robust, coarsely sculptured black species, 9–12 mm. in length, with white scales forming an irregular pattern on the elytra and clothing densely most of the under surface. The weevil attacks the pseudo-bulbs and leaves of the *Cattleya* and other orchids. A closely allied species, *C. forbesii* Pascoe, has also been taken in New Jersey greenhouses.⁹

253. *Heilipus squamosus* (Lec.).

My first capture of this large Hyperid was made April 10, 1923, while beating foliage of sassafras in Skinner's Hammock, northeast of Dunedin, Florida. The only other recorded Florida station is Enterprise.

—. *Dorytomus frosti* Blatch.

The second known specimen of this species, taken at Canaan, Connecticut, was recently recorded¹⁰ by Frost.

273. *Notaris aethiops* (Fab.).

Examples of this species have been received from Edmonton, Alberta, thus extending northwestward the range as given in the Rhynchophora.

—. *Notaris bimaculatus* (Fabr.).

This European species, of which the *N. wyomingensis* Chitt. is a synonym, has been recently recorded¹¹ from Madeline Island

⁹ For an account of this and other greenhouse orchid weevils see Weiss, Ent. News, XXVIII, 1917, 26–28, and Barber, Proc. Ent. Soc. Wash., XIX, 1917, 12.

¹⁰ Bull. Brook. Ent. Soc., 1924, 37.

¹¹ Buchanan, Ent. News, 1923, 280.

and Madison, Wisconsin. Its known range in this country extends from Iowa and Wisconsin northwest to Wyoming and Ft. Resolution, Mackenzie.

280. *Desmoris pervisus* Dietz.

Examples of this species, taken at Avon, New Jersey, August 30, were received for naming from C. A. Frost. Not before recorded east of Illinois.

306. *Smicronyx nebulosus* Dietz.

This has proven to be a rather common species in Marion County, Indiana, occurring on low herbage in dense woodland in August and September.

321. *Anchodemus angustus* Lec.

This species has recently been taken in small numbers from arrow-head and pickerel weed at Dunedin and Royal Palm Park, Florida, and probably occurs throughout that State.

327. *Bagous magister* Lec.

A single specimen of this, our largest *Bagous*, was sifted March 28 from grass roots taken from the sides of a ditch near Dunedin, Florida. This is the first record for that State.

——. ***Bagous carinatus*, new species.**

Oblong-oval, robust for the genus. Piceous-black; head, beak, thorax, femora, tibiae and under surface densely clothed with a crust of fine clay-yellow scales; elytra similarly and evenly clothed with fuscous-black scales and with a whitish bar, reaching fifth interval on each side, across the suture in front of declivity; antennae and tarsi reddish-brown. Beak shorter than thorax, stout, subcylindrical. Thorax slightly wider than long, sides swollen in front of middle, disk uneven, rather strongly constricted near apex and with a fine median carina reaching from constriction to base. Elytra one-half wider at base than thorax; humeri obliquely subtruncate; sides straight and very slightly converging to apical fifth, thence more strongly so to the narrowly rounded tips; disk with intervals 3, 5 and 7 slightly wider than the others and distinctly elevated throughout their length, the fifth ending in a prominent tubercle at upper edge of declivity, the seventh swollen in front on humeri. Length, 3.5–4.2 mm.

Described from a pair of individuals taken March 1 from beneath a chunk on the side of the canal at Moore Haven, Florida. Belongs under *a* of Group I, p. 231, of the Rhynchophora, but the disk of pronotum, while uneven, is without the distinct short ridges of either *magister* or *cavifrons* and with a median carina not found in either of those species. The male is also distinctly smaller than in either.

340. *Bagous obliquus* Lec.

The first definitely known Indiana specimens of this widely distributed species were taken in Marion County on May 30, 1922. They were swept from low herbage along the side of a pond.

363. *Otidocephalus myrmex* (Hbst.).

Champlain and Knull have recorded¹² the occurrence of the larvæ of this weevil in numbers near Harrisburg, Pennsylvania, on the dead or dying twigs of sycamore which had been attacked by sycamore blight. The adults, upon emerging in confinement, fed upon the fungous pustules on the bark.

366. *Otidocephalus scrobicollis* (Boh.).

The same authors record¹³ the finding of both pupa and adults of this species near Hummelstown, Pennsylvania, in fallen dead branches of the white oak, *Quercus alba* L.

367. *Otidocephalus dichrous* Lec.

Several examples of this species were beaten from the foliage of cabbage palmetto at Royal Palm Park, in March.

398. *Orchestes ephippiatus* (Say).

This weevil is a very active acrobat, often jumping from one to three feet several times in rapid succession when beaten into an umbrella or sifted onto a paper.

406. *Orchestes rufipes* Lec.

Weiss and Lott have recorded¹⁴ the occurrence of this weevil in numbers at Rutherford, New Jersey, where both adults and

¹² Ent. News, XXXII, 1921, 271.

¹³ Can. Ent., LV, 1923, 115.

¹⁴ Psyche, XXVIII, 1921, 152.

larvæ, during their entire existence, feed on the foliage of the willows, *Salix lucida* Muhl and *S. nigra* Marsh. The adults hibernate in colonies under loose bark, in partly dead wood and other cover. They emerge in April or May and feed on the leaves, doing much damage. Eggs are deposited in May and June, hatch in the latter month and adults of the new brood emerge about the middle of July. There is but one brood each year.

408. *Elleschus scanicus* (Payk.).

Examples of this European species have been received from Edmonton, Alberta, where they were taken by F. S. Carr. It was recorded in the Rhynchophora only from New Jersey and Pennsylvania.

415. *Anthonomus elegans* Lec.

This has been recorded as a submarine Floridian species, found only on foliage near the sea. Examples are at hand from Palmdale and Royal Palm Park, both inland stations; also from Miami and Caxambus in addition to those previously mentioned. At Palmdale it was swept from a tall St. Johnswort.

433. *Anthonomus subguttatus* Dietz.

Examples of this species vary much in size and general color. One from Palmdale, Florida, also swept from St. Johnswort, is reddish-brown and but 2 mm. in length, while another, identified by H. C. Fall, from Washington, D. C., is piceous-black and 3 mm. in length.

435. *Anthonomus consimilis* Dietz.

Of this species only sporadic individuals from widely distant localities are known. One was swept from low ground herbage along White River in Marion County, Indiana, on May 1, and two others taken at Natick and Monterey, Massachusetts, in July, were received from Frost. Not before recorded east of the District of Columbia.

— ***Anthonomus bicorostris*, new species.**

Elongate-oval, robust. Reddish-brown, above thinly clothed with short whitish hairs or hair-like scales, these strongly condensed on scutellum and

extreme base of fifth interval, and moderately so around a rather small denuded area on each elytron; basal three-fifths of beak dark reddish-brown, remainder pale brownish-yellow; elytra with a large common rather vague heart-shaped scutellar dusky blotch and each with a short dark oblong spot on first interval and a second longer one on third and fourth intervals within the postmedian denuded area; legs reddish-brown, thinly clothed with whitish hairs; under surface thickly clothed with oblong-oval white scales. Beak rather stout, subcylindrical, as long as head and thorax, male, one-third longer, female. Antennæ slender, inserted in front of middle, scape reaching eye, first joint of funicle clavate, nearly as long as 2-4 united, second one-half longer than third, 3-7 short, subequal; club one-third as long as funicle, fusiform. Thorax slightly wider at base than long, sides feebly rounded, disk distinctly constricted at apical fourth, finely, densely and deeply punctate. Elytra oval, one-third wider at base than thorax, striæ finely and closely punctate; intervals moderately convex, each with rows of fine punctures. Femora each armed with a short conical tooth. Ventrals 3-5 nearly equal in length, the third slightly the longer. Length, 2.5-3 mm.

Common near Miami, Florida, in March, on the foliage of the potato-tree, *Solanum verbascifolium* L., which grows abundantly along the roadsides and margins of Brickell's Hammock; also at Royal Palm Park, but less common, on the same plant. Belongs to Group D, p. 299, of the Rhynchophora, but differs from all the other species by its bi-colored beak, oblong dark spots of denuded elytral area and long clavate basal joint of funicle.

449. *Anthonomus varipes* Duval.

This species was common at both Miami and Royal Palm Park, Florida, but only on the *Solanum* above mentioned, which is very probably its host plant.

455. *Anthonomus squamulatus* Dietz.

A half dozen examples were beaten August 20 from red cedar, *Juniperus virginiana* L., in Putnam County, Indiana. Received also from Holland, Michigan and Kankakee, Illinois.

— ***Anthonomus australis*, new species.**

Elongate-oval. Color throughout a nearly uniform dark chestnut-brown, thickly and nearly evenly clothed, both above and beneath, with oval white scales, these slightly more condensed along the first and fourth intervals of elytra; scape of antennæ, tibiæ and tarsi paler. Beak rather stout, cylin-

dricul, naked, as long as head and thorax, male, one-fifth longer, female, finely striate and punctate. Antennæ inserted at apical two-fifths of beak, funicle 7-jointed, joint 1 stout, clavate, as long as 2 and 3 united, 2 but slightly longer than 3, 3-7 equal. Thorax slightly wider at base than long, its sides nearly straight, very slightly converging from base to apex, not or very feebly constricted near apex, its sculpture concealed by scales. Elytra only one-fifth wider at base than thorax, humeri and umbones scarcely evident, sides parallel to apical third, thence rounded to apex; disk finely striate, the sculpture concealed; intervals 3, 5 and 7 narrower than the others. Length, 2.5-2.7 mm.

Three specimens taken at Dunedin, Florida, November 17 and December 13, by sweeping tall dead grass along the margins of ponds. Belongs under *aa* of the key to Group G, p. 309, of the Rhynchophora, but distinctly smaller than either *rufipes* or *disjunctus*, with vestiture paler and much more evenly distributed, and lacking the pronotal constriction of the former and the elongate second joint of funicle of the latter.

458. *Anthonomus disjunctus* Lec.

Specimens taken at Lexington, Massachusetts, August 30, are in the Frost collection. Not before recorded from New England.

— *Anthonomus robinsoni* Blatch.

Three specimens of this very aberrant Anthonomid have been taken in Indiana in recent years, one in Putnam County, May 16, by sweeping weeds in low woods along the banks of a stream, the others in Marion County, May 30, while sweeping herbage in dense upland woods. It was described¹⁵ from West Point and Batavia, New York, and has not been recorded elsewhere.

— *Anthonomus xantus*, new species.

Oval, robust. Head, antennæ and beak reddish-brown; thorax, legs and sutural line fuscous-brown; elytra and under surface pale reddish-yellow sometimes with a fuscous tinge; above sparsely clothed with a very fine straw-yellow pubescence, this condensed on scutellum and slightly so around a postmedian, feebly denuded somewhat darker area on elytra. Funicle 6-jointed, joint 1 subclavate, twice the length of 2, 3-6 moniliform; club short, pubescent, very compact. Beak slender, cylindrical, about as long

¹⁵ Rhyn. N. E. Amer, 312.

as head and thorax united. Thorax slightly wider at base than long, sides feebly rounded, disk constricted near apex, finely and closely punctate, each puncture bearing a fine prostrate whitish hair. Elytra oval, conjointly one-third wider at base than thorax; striae rather deep, marked with close-set round punctures, intervals not wider than striae punctures, feebly convex; umbones prominent, smooth, dull yellow. Under surface finely and sparsely punctate; pubescent with rather long yellowish hairs, these condensed on meso- and metapleura. Front femora armed beneath with a single small acute tooth. Length, 1.6-1.8 mm.

Described from four specimens taken by C. A. Frost at Sherborn, Massachusetts, July 26. Belongs under *a* of Group B. of the subgenus *Sexarthrus*, p. 313, of the Rhynchophora. Differs from the other species there found by the shorter, more robust form, paler elytra, yellow umbones and dense pubescence of the meso- and metapleura.

467. *Anthonomus decipiens* Lec.

The first specimen known from Indiana was swept September 4, 1921, from low herbage along the margin of a pond in the White River bottoms, Marion County.

478. *Pseudanthonomus inermis* Blatch.

Several specimens were swept, March 28, from the flowers of a tall St. Johnswort at Palmdale, Florida. The disk of thorax in this species is evidently but not strongly constricted behind the apex. In the original description it was said to be "not constricted."

482. *Piazorhinus pictus* Lec.

This species is now at hand from Dunedin, Gulfport and Lakeland, Florida. About Dunedin it occurs on low herbage, growing along extinct wet weather ponds.

483. *Piazorhinus thoracicus* Casey.

A single specimen was taken at Istokpoga, Florida, March 29, and another at Dunedin, April 3, both by sweeping in dense hammocks. Known heretofore only from Palm Beach, Florida.

487. *Miarus hispidulus* Lec.

Numerous specimens were taken at Royal Palm Park, Florida, March 27, from between the "boot-jacks" and boles of cabbage palmetto, growing in open pine woods.

504. *Lixus punctinasus* Lec.

Riverdale, Illinois, and Lake County, Indiana, are new stations from which this species has been taken since 1916.

— ***Lixus novellus*, new species.**

Elongate, subcylindrical. Color, a uniform dark chestnut-brown, sparsely clothed with a fine yellowish-gray prostrate pubescence, this condensed to form a stripe along the sides of thorax, a less distinct one on sides of elytra and also numerous small vague mottlings on elytra; antennæ and tarsi dark reddish-brown. Beak stout, subcylindrical, slightly longer than thorax, finely and sparsely punctate. Head with a short very fine frontal groove. Second joint of funicle one-third longer than the next two united. Thorax about as wide at base as long, its sides parallel on basal half, very slightly converging from middle to apex; disk very finely and rugosely punctate, also with a few larger scattered very shallow punctures, and a deep median groove, widening behind, extending from apical fourth to base. Elytra as wide at base as thorax, their sides straight and subparallel to apical fifth, thence converging to a conjointly rounded apex; disk with an oblong median concavity, continuous with that of thorax, on basal fifth; striæ represented by rows of rather large, rounded shallow close-set punctures. Under surface finely and shallowly punctate and with a longitudinal median groove on metasternum and first and second ventrals. Length, 15 mm.

Steuben County, Indiana, August 5, swept from low vegetation on the borders of a lake. Belongs under *aa.* of Group II, p. 340, of the Rhynchophora. Longer than any member of that group except *fimbriatus*, from which it differs in color, much more slender body, shorter and stouter beak, etc. Probably a member of the Alleghanian fauna.

531. *Baris interstitialis* (Say).

This species has been received from Gainesville, Florida, for naming. It has previously been definitely recorded only from Crescent City, that State, by Wickham,¹⁶ the species so listed by

¹⁶ Bull. Buffalo Soc. Nat. Sci., IX, 1909, 405.

Schwarz from Haulover and Tampa being *B. splendens* Casey. Champlain and Knull have recently recorded¹⁷ the taking of *interstitialis* during the winter from the roots of cocklebur at Harrisburg, Pennsylvania.

Examples of seven species of *Baris* which are not included in the Rhynchopora are at hand from Indiana and Florida, but until opportunity is found to compare them with Major Casey's types, they cannot be definitely placed.

533. *Cosmobaris scolopacea* (Germ.).

This species has been taken by Wolcott in July at Willow Springs, Illinois, this being its first record west of Pennsylvania. It has been recently reared by Champlain and Knull from lamb's quarters (*Chenopodium*), the larvæ working in the pith.

— *Centrinaspis argentis*, new species.

Allied to *picumnus* Hbst., but smaller with thorax shorter. General color the same but scales of upper surface linear, silvery-gray, not yellowish, in hue and much less dense, there being only two rows on each elytral interval instead of three as in *picumnus*; scales of lower surface, smaller, narrower and pure white; also less dense. Males without a spine in front of coxæ. Length, 2–2.3 mm.

Crawford County, Indiana, August 4; several specimens swept from golden-rod. Submitted to Major Casey, who wrote that it was "a new species near *picumnus*, but with shorter and sparser vestiture."

— *Nicentrus wyandottei* Blatch.

Since this species was described¹⁸ a number of additional examples have been taken at the type locality and one in Putnam County, Indiana, 110 miles farther north.

601. *Oömorphidius laevicollis* Lec.

I was much pleased to secure, during the past winter, four examples of this very rare species at Dunedin, Florida. They

¹⁷ Ent. News, 1921, 272.

¹⁸ Journ. N. Y. Ent. Soc., XXX, 1922, 118.

were taken on December 8 and April 7 by sifting weed debris along the bay front just south of my residence. It had been heretofore taken in Florida only at Crescent City.

610. *Limnobaris puteifer* Casey.

Specimens taken at Southern Pines, North Carolina, May 1, were received from Frost. Known heretofore only from Ohio and Indiana.

625. *Stethobaris corpulenta* Lec.

Several examples of this robust Barid have recently been found at Dunedin, Florida. They were taken in April by sweeping low huckleberry near the margins of a lake.

632. *Zygobarinus coelestinus* (Linell).

Four examples of this rare and handsome weevil were taken in the dense hammock on Paradise Key at Royal Palm Park, Florida, in March, by sweeping low herbage and beating dead limbs along the pathways. It was known heretofore only from Cocconut Grove, that State, the type locality. The specimens taken have the thorax wholly or in great part tinged with purplish-brown.

635. *Catapastus conspersus* (Lec.).

This species has recently been taken in numbers on several occasions from a clump of prickly ash, growing on the bluffs of White River near Indianapolis.

636. *Catapastus diffusus* Casey.

Found frequently in recent years near Dunedin, Florida. Beaten from button-wood, *Conocarpus erecta* L., on Hog Island in March and taken from decaying fungus at base of oak stump in November.

640. *Barinus curticollis* Casey.

A single female of this species, 3.8 mm. in length, was taken at Dunedin, May 29, while sweeping low herbage along a roadside ditch. Known heretofore only from the District of Columbia, Missouri and Louisiana. Casey gives the length as 2.7-3 mm.

- . *Acythopeus orchivora* Blackb., Trans. R. Soc. Aust., 1900, 61.

This is a small, dull black barid weevil, about 3.5 mm. in length, having the beak and legs thickened, the thorax wider than long with sides rounded and disk coarsely punctured. It is an Australian species which has found a foothold in the green-houses of New Jersey, where it attacks orchids of the genus *Dendrobium*. Two closely allied forms, the *A. atterimus* Waterh. and the *A. gilvinotatus* Barber are Philippine species which have been taken in green-houses in the District of Columbia and New Jersey.¹⁹

- . *Diorymerellus laevimargo* Champ., Entom. Mo. Mag., 1916, 200.

Examples of this minute barid are at hand which were taken by H. B. Weiss in green-houses in Bergen County, New Jersey. It is about 1.8 mm. in length, black, strongly shining, the thorax punctate along the front and hind margins, its middle and the entire disk of elytra smooth. It is an introduced Central American form and feeds on the leaves, flower stalks and pseudobulbs of orchids.

653. *Cylindrocopturus nanulus* (Lec.).

Taken frequently in April about Dunedin, Florida, by sweeping tall dead grasses along the margin of ponds and by beating wax-myrtle, *Cerothamnus ceriferus* (L.). Recorded heretofore in that State only from Crescent City and Enterprise.

677. *Acallodes saltoides* Dietz.

New stations for this species are Evanston, Illinois, and Porter County, Indiana; not before recorded from either State.

700. *Ceutorhynchus floridanus* Leng.

A single individual was taken at Dunedin, Florida, April 9, from beneath a board on the bare sand of the bay beach. Known heretofore only from Enterprise and Kissimmee, that State.

¹⁹ See Barber, Proc. Ent. Soc. Wash., XIX, 1917, 12-22.

— *Amalus haemorrhous* Hbst.

This European species has been recorded²⁰ by Buchanan from Syracuse, New York, and specimens from South River and Lakehurst, New Jersey, were sent me by the late E. A. Bischoff. The genus belongs under *b* of the *Phytobii*, p. 454, of the Rhynchophora, and the weevil is a small, oblong robust reddish-brown or blackish form, 1.7 mm. in length, with reddish legs and antennæ, 6-jointed funicle, approximate front coxæ, the thorax without tubercles or postocular lobes and the elytra with a scutellar and a subapical sutural spot of white scales. It bears a close resemblance to *Ceutorhynchus zimmermanni* Gyll., from which it is distinguished by the lack of postocular lobes and more elongate form. Bischoff took it on dandelion flowers. In Europe it occurs on heather, *Calluna vulgaris* L., and as this plant occurs along the Atlantic coast between Newfoundland and Rhode Island, the weevil may also be found in that region.

727. *Conotrachelus juglandis* Lec.

Two specimens, the first known from Florida, were taken at Dunedin, in March and April, one by beating branches of recently felled pine, the other along a roadway in a dense hammock. Champlain and Knull (loc. cit. 1921) question its occurrence on hickory as mentioned in the Rhynchophora, and state that it breeds in the leaf stems of walnut and butternut. As the only species of Juglandaceæ growing about Dunedin belong to the genus *Hicoria*, the weevil must breed in them if it is limited to that family for a host plant.

734. *Conotrachelus elegans* (Say).

Champlain and Knull record this weevil as damaging the new growth of hickory in New York. "They were very abundant in May, feeding, mating and egg-laying. The adults damage the stems in feeding and in making egg punctures, and the larvæ work in the shoots and leaf stems, causing them to wilt and fall."

²⁰ Proc. Ent. Soc. Wash., 1923, 79.

— *Conotrachelus maritimus* Blatch.²¹

Specimens are at hand from Everglade, Florida. Known elsewhere only from Dunedin.

— *Conotrachelus biscayensis* Fall.²¹

Taken in some numbers in March both at Miami and Royal Palm Park, by beating along the pathways of dense hammocks. Known heretofore only from Biscayne, Florida.

— *Euscepes deceptus*, new species.

Elongate-oblong, subparallel, convex. Piceous-brown; antennæ reddish-brown, the club paler; head, thorax and basal half of beak thickly clothed above with circular grayish concave scales, and bearing numerous short, blunt pale erect setæ; elytra and legs densely clothed with similar but much smaller brown scales; under surface thinly covered with larger pale flat ones. Beak stout, a little shorter than thorax, subspatulate, its apical half coarsely and shallowly punctate; in repose received in a deep prosternal groove. Antennæ inserted at middle of beak, but about one-third longer than the latter; funicle 6-jointed, joints 1 and 2 subequal in length, 1 much the stouter, obconical, 3 to 6 moniliform. Sculpture of thorax and elytra concealed by scales, the former widest at middle, strongly and broadly constricted at apical third, with numerous pale setæ in front of constriction and two tufts of darker ones behind it. Elytra one-third wider at base than thorax, humeri rectangular, striæ coarsely punctate; disk with scattered tufts of stout dark erect setæ and numerous paler inclined ones behind the middle. Legs beset with similar but shorter setæ. Length, 3.5 mm.

Described from a single specimen taken March 12 while beating in Brickell's hammock, south of Miami, Florida. Larger and with a very different vestiture from *E. porcellus*, our only other eastern member of the genus.

— *Tyloderma laevicollis* Blatch.

The third known example of this Floridian species was taken at Istokpoga March 28, while sweeping Ericads along the margin of the lake.

782. *Acalles carinatus* Lec.

A single specimen was taken near Indianapolis, Indiana, June 14, from beneath the bark of a dead sugar maple. Known in the State heretofore only from Posey County.

²¹ For notes pertaining to the last two species see Journ. N. Y. Ent. Soc., XXVIII, 1920, 172.

784. *Acalles granosus* Lec.

Several specimens have been taken both at Dunedin and Royal Palm Park, Florida, by beating the foliage of cabbage palmetto.

790. *Acalles sylvosus* Blatch.

This species, known heretofore only from the types taken at Little River, Florida, was beaten in some numbers from dead branches along the pathways of the dense hammock on Paradise Key.

798. *Apteromechus ferratus* (Say).

Champlain and Knull record (loc. cit.) the breeding of this species in Pennsylvania "in the outer corky bark of sassafras." In Florida it breeds in the red-bay, a tree closely related to the sassafras, both belonging to the family Lauraceæ.

803. *Cryptorhynchus lapathi* (Linn.).

In recent years this European willow weevil has been taken in Porter and Kosciusko counties, Indiana, and probably occurs throughout the northern half of that State.

807. *Cryptorhynchus obtentus* (Hbst.).

This species, heretofore known in Florida only from Enterprise and Biscayne Bay, is at hand from Dunedin, Moore Haven and Royal Palm Park, that State. It has there been taken only by beating dead limbs in dense hammocks. In Pennsylvania it has been reared from decaying limbs of the black birch, *Betula lenta* L.

810. *Cryptorhynchus apiculatus* Gyll.

Two examples of this scarce weevil have been taken in April at porch light at my residence in Dunedin, Florida.

816. *Acamptus rigidus* Lec.

The second known specimen from Indiana was taken September 2 from beneath the bark of a dead beech in Marion County.

817. *Anchonus floridanus* Schwarz.

Two individuals, the only ones known from the west coast of Florida, were taken December 1, from beneath a piece of bamboo on the bay beach at Dunedin.

818. *Anchonus duryi* Blatch.

From two to a half dozen specimens of this subarctic species are taken each winter beneath cover along the same beach.

830. *Cossonus subareatus* Boh.

Examples of this species, taken by F. S. Carr, at Edmonton, Alberta, are at hand. It has not before been recorded from that country.

838. *Stenomimus pallidus* (Boh.).

Up to 1923 this species was known in Indiana only from Vigo County. On October 1st, that year, sixty or more were taken in Putnam County from beneath the loose bark of a walnut stump, the bole of which had been felled the previous year. It probably occurs plentifully throughout its range beneath walnut bark with the proper modicum of moisture present, but is overlooked on account of its small size.

— *Pentarthrinus dissimilis*, new species.

Allied to *P. nitens* Horn. Color the same. Differs in having the body more slender; beak broader, less convex, and without a fovea in the basal impression; thorax narrower, widest at middle, more narrowed in front, its punctures coarser, more widely separated; elytral striæ with punctures more rounded; intervals narrower, each with a single row of very fine punctures. Length, 2.3–2.7 mm.

Dunedin, Lakeland, Cape Sable and Hillsborough Canal, Florida; December to April. A rather common species in southern Florida, where it occurs on bunches of Spanish moss and dead vines in dense hammocks; in spring taken beneath chunks along the beaches at Cape Sable and Dunedin. Heretofore confused with *P. nitens*, but very distinct in the characters mentioned above.

852. *Pentarthrinus anonus* Blatch.

A dozen or more specimens were taken at Royal Palm Park March 17 by beating masses of dead moon-vine along the borders of hammocks. Described from Lake Okeechobee and not recorded elsewhere. It is probable that the moon-vine instead of the custard apple, *Anona glabra* L., is its host plant, as the former was abundant at both stations while the *Anona* was not found at the Park.

858. *Lirolepta stenosoma* Blatch.

Taken by scores March 24, 1922, along the Hillsborough Canal, southwest of Lake Okeechobee, by beating the moon-vine and custard apple mentioned above. Both adults and larvæ were found in the stems of the moon-vine, and the adults in or beneath the bark of the dead *Anona* twigs.

859. *Rhynchophorus cruentatus* (Fab.).

Numerous larvæ, pupæ and adults of this, our largest native weevil, were sent me from New Smyrna, Florida, in April, 1924, with the statement that the finest date palm in that place had recently died, and that the beetle in all stages was found in burrows at the bases of the leaves. Some of the citizens thought that the weevils caused the death of the tree, but it is more likely that they found it a suitable host and breeding place after death had begun.

860. *Rhodobaenus tredecimpunctatus* (Ill.).

Weiss and Lott have recently given²² an interesting account of the life history of this species, based on observations made in Central New Jersey. They found it breeding in iron-weed, *Vernonia noveboracensis*, the eggs being deposited singly in the upper portion of the young stem and hatching in June. Pupation began in August, the adults emerging in September and hibernating.

—. *Metamasius mosieri* Barb.

Several specimens were beaten from dead leaves of cabbage palmetto and others from dead air plants, *Tillandsia utriculata* L., at Royal Palm Park in March.

²² Ent. News, XXXIV, 1923, 103.

— *Eucactophagus weissi* Barber, Proc. Ent. Soc. Wash., XIX, 1917, 21.

This large Calandrid weevil occurs in greenhouses in New Jersey, where it feeds on the bulbs of various species of orchids. It is 13–17 mm. in length, and has the elytra yellowish with suture, base, sides in part and apical fourth black. A single specimen of a closely allied species, *E. graphipterus* Champ., has been taken in Connecticut.

862. *Sphenophorus inaequalis* (Say).

Examples taken at Monterey, Massachusetts, July 14, were received from Frost. Not before recorded from New England.

864. *Sphenophorus latinasus* Horn.

A single specimen of this handsome Calandriid, known heretofore only from the unique Georgia type, was taken at Moore Haven, Florida, March 27, 1922, while sifting the roots of a tall bunch-grass growing in the muck prairie formed at that point by draining the old bed of Lake Okeechobee. The weevil agrees in nearly all particulars with the original description, the only important difference being that the median vitta of thorax is slightly dilated at middle instead of being “not dilated,” as stated by Horn. The natural coating of the intervals between the vittæ of thorax, as well as of the whole elytra except the elevated basal half of third interval and a small humeral and sub-apical callus, which are shining black, is of a purplish hue and under the lens appears to be minutely alutaceous. The most distinctive features of the species are the broadly bilobed third tarsal joints of all the legs and the peculiar beak which is strongly compressed and much enlarged at tip as described in the *Rhynchophora*.

875. *Sphenophorus cariosus* Oliv.

An example of this species, reared from a larva found feeding on the buds of cocoanut, March 6, and which issued as adult, May 12, was sent me for naming by Prof. A. H. Beyer of Gainesville, Florida.

880. *Sphenophorus retusus* Gyll.

Chittenden, *loc. cit.*, below, p. 155, has placed this species as a synonym of the *Calandra necydaloides* Fabr., and gives his reasons for so doing. The original description of Fabricius (1801), as well as that of Olivier (1807), of *necydaloides* are quoted by Chittenden. Both are very brief and could apply to any one of a half dozen species known from this country at present.

890. *Sphenophorus pontederiae* Chitt.

Since 1916 this species has been taken in some numbers at Dunedin, Lakeland and Ft. Myers, Florida. It occurs in muck around or near the decaying roots of pickerel-weed.

891. var. *Sphenophorus venatus rectus* Say.

A single example, so determined by Dr. Chittenden, was taken August 30, 1923, from beneath a chunk on the bank of the Ohio River near Leavenworth, Crawford County, Indiana. From typical *venatus* it differs in its smaller size (6.5 mm.); dark red color without surface coating; antennal club much smaller, more rotund; disk of thorax more flattened, much more densely punctate, the vittæ much narrower, vaguely defined; elytral intervals narrower, not alternating in width or elevation, much more coarsely punctate, the punctures of sutural intervals distinct and very close-set. This form was placed by Horn as a synonym of *venatus*.²³ In this he was followed by other authors, including Chittenden.²⁴ That author has now changed his opinion (Ms.) and in view of the differences above mentioned, regards the form as well worthy of a varietal name.

892. *Sphenophorus vestitus* Chitt.

Chittenden, *loc. cit.*, below, p. 152, states that the form so named by him "is simply a smooth gray-coated variation of *S. venatus* Say, not entitled even to a varietal name."

* * *

Dr. F. H. Chittenden has recently published²⁵ an article entitled "New Species and Varieties of *Sphenophorus*, with Notes

²³ Proc. Am. Ent. Soc., XIII, 1873, 426.

²⁴ Proc. Ent. Soc. Wash., VI, 1904, 131.

²⁵ Proc. Ent. Soc. Wash., 1924, 145.

on Certain Other Forms.” In this he describes as new two species and four varieties from the region covered by the *Rhyncho-phora* of N. E. America. These, briefly mentioned, are as follows: the page numbers in parentheses referring to that work:

—. *Sphenophorus schwarzii* Chitt.

A species 12 mm. in length, black with porcelain-gray crust on elytra, most of lower surface and legs. “Allied to the *aequalis* group (p. 553) but differs noticeably in the nearly straight slender rostrum, flat pronotum with declivous sides, strongly vil-lous lower surface and strongly fimbriate legs” (*Chittenden*).

Described from Fortress Monroe, Virginia.

—. *Sphenophorus setiger intervallatus* Chitt.

Differs from typical *setiger* (p. 557) in having the first five elytral intervals long, wide and subequally elevated.

New Jersey, New York, Massachusetts and Texas.

—. *Sphenophorus peninsularis nasutus* Chitt.

Alutaceous natural coating much less than in the typical form (p. 557). Beak of female only three-fourths as long as thorax. Length, 12.5–14.5 mm.

New York and vicinity.

—. *Sphenophorus robustus rectistriatus* Chitt.

If, as its author states, there “are all possible intergradations between this form and *robustus*”—why does he encumber nomenclature by giving it a name?²⁶

—. *Sphenophorus blatchleyi* Chitt.

“Similar in general appearance to *zeæ* Walsh (p. 566), from which it differs in the lack of basal protuberance of the beak, much coarser and shallower elytral punctures, more densely punctate lower surface and narrower third joint of anterior tarsi” (*Chittenden*).

Described from Ormond, Florida.

²⁶ See Journ. N. Y. Ent. Soc., XXXII, 1924, 130.

— *Sphenophorus germari pinguis* Chitt.

“Shorter and more robust than typical *germari*; elytra little longer and scarcely wider than prothorax. Anterior tibiæ moderately angulate below the middle, nearer the apex than in *germari*. Length, 8 mm.” (*Chittenden*).

Described from Tampa, Florida.

* * *

Additional errors and omissions discovered in the “Rhyngophora” since the former list was published²⁷ are as follows:

Page.

126. Fourteenth line, insert “beneath” after “separated.”
 176. In key, *humilis* should follow *c* and *anthracinus*, *cc*.
 176. Transfer “at base” in fifth line under *H. mirabilis* to the next line after “wide.”
 279. In key *b.* should be *bb*.
 377. In key, after *11*, delete first “s” in metasternum.

WATER BEETLES

A noteworthy report on “Water Beetles in Relation to Pond-fish Culture, with Life Histories of Those Found in Fishponds at Fairport, Iowa,” by Charles Branch Wilson has been issued as Document 953 from the Bulletin of the United States Bureau of Fisheries, vol. xxxix, 1923–24. This report deals in detail with such subjects as locomotion, migration, structural adaptations, enemies of the larvæ, pupæ and adults, distribution of the species in ponds at Fairport, systematic descriptions of Fairport species, and contains keys for the identification of larvæ and pupæ and much biological information. In addition it is illustrated by 148 figures and carries an extensive bibliography.—ED.

²⁷ Journal N. Y. Ent. Soc., XXVIII, 1920, p. 177.